

## ABSTRACT OF THE DISCLOSURE

The present invention comprises a technique for performing a reassembly assist function that enables a processor to perform packet reassembly in a deterministic manner. The technique employed by the present invention enables a processor to reassemble a  
5 packet without having to extend its normal processing time to reassemble a varying number of fragments into a packet. The invention takes advantage of the fact that the reassembly assist can be dedicated exclusively to reassembling a packet from a series of fragments and thereby offloading the reassembly process from the processor.